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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,317	04/08/2004	Gregory W. Hoverson	4695-00097	6034

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EXAMINER

CHIESA, RICHARD L

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/824,317

Applicant(s)

HOVERSON ET AL.

Examiner

Richard L. Chiesa

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 31-35 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 10-16, 19, 20, 24-33, 36, 37 is/are rejected.
- 7) ☐ Claim(s) 3-9, 17, 18, 34, 35 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date June 29, 2004.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings filed on April 8, 2004 are accepted by the Examiner.

Specification

2. The disclosure is objected to because of the following informalities: (A) The serial number --10/820,541-- should apparently be inserted immediately after "Application No." on the fourth line of paragraph [0010] on page 3. (B) The phrase --now U.S. Patent No. 6,994,076,-- should apparently be inserted immediately before "which head" on the fifth line of paragraph [0010] on page 3. (C) The phrase --, now abandoned-- should apparently be inserted between "August 5, 2003" and the period on the ninth line of paragraph [0013] on page 4. Appropriate correction is required.

Claim Objections

3. Claim 34 is objected to because the word "second" on the second line of claim 34 should apparently be changed to --said--. Correction and/or clarification is required.

Claim Rejections – 35 USC 102/103

4. The following is a quotation of the appropriate paragraphs of 35 USC 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless--

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 USC 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 USC 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicants are advised of the obligation under

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 USC 103(c) and potential 35 USC 102(f) or (g) prior art under 35 USC 103(a).

7. Claims 1, 2, 10, 11, 14, 15, 26-28, 31, and 32 are rejected under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over U.S. Patent No. 3,985,524 to Masuda. Masuda (note Figures 1-6) discloses an electrostatic collection apparatus and process with first and second corona discharge zones 8, 14 spaced along a flow path (note col. 5, lines 26-51) as claimed (35 USC 102b). It would appear that Masuda may not explicitly mention that the collector apparatus is space-efficient or that the collection process increases residence time. However, Masuda does state that the collector is compact and economical (note col. 1, lines 4-8, and 52-57). Furthermore, Masuda's channel-shaped elements 7 of the electrodes 3 arranged transverse to the gas flow (note Abstract, and col. 4, lines 41-66) produces a tortuous gas flow path resulting in stabilization and longer residence time in the collector. Consequently, it is inherent or at least would have been readily obvious to one having ordinary skill in the art (35 USC 103a) that Masuda's electrostatic collector apparatus and process is space-efficient and increases residence time.

8. Claims 12, 13, 19, 20, 29, 30, 36, and 37 are rejected under 35 USC 103(a) as being unpatentable over Masuda in view of U.S. Patent No. 2,114,682 to Gumaer. Masuda, as described above in paragraph 7, discloses an electrostatic collector apparatus and process

substantially as claimed. Apparently, Masuda does not explicitly state that the various gas flow and corona discharge paths are concentric. In any case, Gumaer teaches the well-known use of concentrically arranged initial gas and corona discharge paths (note Figure 10) in an electrostatic collection device and method for the purpose of ensuring easy installation and operation (note first page, left column, lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art to employ concentric initial gas flow and corona discharge paths in the Masuda electrostatic collector apparatus and process in order to facilitate installation and operation as taught by Gumaer.

9. Claims 16 and 33 are rejected under 35 USC 103(a) as being unpatentable over Masuda in view of U.S. Patent No. 6,287,368 to Ilmasti. Masuda, as described above in paragraph 7, discloses an electrostatic collector apparatus and process substantially as claimed with the apparent exception of a serpentine gas flow path. Ilmasti (note Figure 6) teaches the well-known use of a serpentine gas flow path 30 in an electrostatic collection device and method for the purpose of improving particle settling (note col. 2, lines 57-61) and for this same reason it would have been obvious to employ such an expedient in the Masuda electrostatic collection apparatus and process.

Allowable Subject Matter

10. Claims 21-25 are allowed.

11. Claims 3-9, 17, 18, 34, and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. As allowable subject matter has been indicated, applicants' reply must either comply with all requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP section 707.07(a).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. These references have been cited as art of interest to show other electrostatic collection systems.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard L. Chiesa whose telephone number is (571) 272-1154.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane S. Smith, can be reached at (571) 272-1166.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center 1700 receptionist whose telephone number is (571) 272-1700.

Facsimile correspondence must be transmitted through (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard L. Chiesa
January 31, 2006

Richard L. Chiesa

**RICHARD L. CHIESA
PRIMARY EXAMINER
ART UNIT 1724**

Jan. 31, 2006